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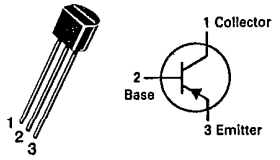
BC212, A, B
BC213, A, B, C
BC214, B, C

CASE 29-04, STYLE 17
TO-92 (TO-226AA)



AMPLIFIER TRANSISTORS

PNP SILICON

Refer to BC307 for graphs.

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MAXIMUM RATINGS

Rating	Symbol	BC 212	BC 213	BC 214	Unit
Collector-Emitter Voltage	V_{CEO}	50	30	30	Vdc
Collector-Base Voltage	V_{CBO}	60	45	45	Vdc
Emitter-Base Voltage	V_{EBO}	5.0			Vdc
Collector Current – Continuous	I_C	100			mAdc
Total Device Dissipation @ T_A = 25°C Derate above 25°C	P_D	350 2.8			mW mW/°C
Total Device Dissipation @ T_C = 25°C Derate above 25°C	P_D	1.0 8.0			Watt mW/°C
Operating and Storage Junction Temperature Range	T_J, T_{stg}	−55 to +150			°C

THERMAL CHARACTERISTICS

Characteristic	Symbol	Max	Unit
Thermal Resistance, Junction to Case	$R_{\theta JC}$	125	°C/W
Thermal Resistance, Junction to Ambient	$R_{\theta JA}$	357	°C/W

ELECTRICAL CHARACTERISTICS (T_A = 25°C unless otherwise noted)

Characteristic	Type	Symbol	Min	Typ	Max	Unit
OFF CHARACTERISTICS						
Collector-Emitter Breakdown Voltage (I_C = 2.0 mAdc, I_B = 0)	BC212 BC213 BC214	$V_{(BR)CEO}$	50 30 30	— — —	— — —	Vdc
Collector-Base Breakdown Voltage (I_C = 10μA, I_E = 0)	BC212 BC213 BC214	$V_{(BR)CBO}$	60 45 45	— — —	— — —	Vdc
Emitter-Base Breakdown Voltage (I_E = 10μAdc, I_C = 0)	BC212 BC213 BC214	$V_{(BR)EBO}$	5 5 5	— — —	— — —	Vdc
Collector-Emitter Leakage Current (V_{CB} = 30 V)	BC212 BC213 BC214	I_{CBO}	— — —	— — —	15 15 15	nAdc
Emitter-Base Leakage Current (V_{EB} = 4 V, I_C = 0)	BC212 BC213 BC214	I_{EBO}	— — —	— — —	15 15 15	nAdc
ON CHARACTERISTICS						
DC Current Gain (I_C = 10 μAdc, V_{CE} = 5 Vdc)	BC212 BC213 BC214	h_{FE}	40 40 100	— — —	— — —	
(I_C = 2 mAdc, V_{CE} = 5 Vdc)	BC212 BC213 BC214		60 80 140	— — —	— — 600	
(I_C = 100 mAdc, V_{CE} = 5 Vdc)*	BC212, BC214 BC213		— —	120 140	— —	

BC212, A, B, BC213, A, B, C, BC214, B, C

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ELECTRICAL CHARACTERISTICS (continued) (T_A = 25°C unless otherwise noted)

Characteristic	Type	Symbol	Min	Typ	Max	Unit
Collector-Emitter Saturation Voltage (I_C = 10 mAdc, I_B = 0.5 mAdc) (I_C = 100 mAdc, I_B = 5 mAdc)*		$V_{CE(sat)}$	— —	0.10 0.25	— 0.6	Vdc
Base-Emitter Saturation Voltage (I_C = 100 mAdc, I_B = 5 mAdc)		$V_{BE(sat)}$	—	1.00	1.4	Vdc
Base-Emitter on Voltage (I_C = 2 mAdc, V_{CE} = 5 Vdc)		$V_{BE(on)}$	0.6	0.62	0.72	Vdc
DYNAMIC CHARACTERISTICS						
Current-Gain Bandwidth Product (I_C = 10 mAdc, V_{CE} = 5 Vdc, f = 50 MHz)	 BC212 BC214 BC213	f_T	 — — —	 280 320 360	 — — —	MHz
Common-Base Output Capacitance (V_{CB} = 10 Vdc, I_C = 0, f = MHz)		C_{ob}	—	—	6.0	pF
Noise Figure (I_C = 0.2 mAdc, V_{CE} = 5 Vdc, R_S = 2 Kohms, f = 30 Hz to 15 KHz) (I_C = 0.2 mAdc, V_{CE} = 5 Vdc, R_S = 2 Kohms, f = 1 KHz, f = 200 Hz)	 BC214 BC213 BC212	NF	 — — —	 — — —	 2 10 10	dB
Small Signal Current Gain (I_C = 2 mAdc, V_{CE} = 5 Vdc, f = 1 KHz)	 BC212 BC213 BC214 BC212A, BC213A BC212B, BC213B, BC214B BC213C, BC214C	h_{fe}	 60 80 140 100 200 200 350	 — — — — — — —	 — — — 300 400 400 600	

*Pulse-test: Tp 300 s, Duty-cycle 2%.